#### Case 317: Narrative

Case Vehicle (A): 1999 Dodge	Vehicle (B): 1994 Ford
Type: Ram 1500, Cargo Van	Type: F800, Straight Truck
Driver: 33-year-old male	Driver: 40- year-old male
CDC: 11-FYAW-4	CDC: 99-0000-0

#### SITUATION

1 2 On a snowy day, case vehicle (A) was traveling west at an unknown speed on a twolane asphalt road, in a rural area. The road surface was ice-and-snow covered, it was daylight, and the speed limit was 55 mph (89 kph). 3 Vehicle (B) was a large state truck that was traveling east at an unknown speed, on the same roadway behind vehicle (X). Just as vehicle (B) approached a legal passing zone, the driver steered slightly to the left and accelerated in an attempt to pass vehicle (X), but struck the left rear of vehicle (X) with its right-front corner. After the impact, vehicle (B) rotated clockwise, and the rear portion of the truck crossed the centerline and entered the westbound lane, where the front of case vehicle (A) above the bumper struck the left-rear side of the bed of vehicle (B). Case vehicle (A) was then re-directed to the right, and the left side of case vehicle (A) contacted the left-rear corner of vehicle (B) as the two vehicles separated. 4 Case vehicle (A) then exited the north edge of the road and came to rest off the road, facing in a northwest direction. Both vehicles were towed due to damage. The driver of case vehicle (A) was taken by ambulance to a local hospital and transferred to a trauma center for further treatment. The driver of vehicle (B) did not sustain any injuries and was not transported to a hospital.

# GENERAL VEHICLE DAMAGE AND ESTIMATED CRASH SEVERITIES

5 6 7 Damage to the front of case vehicle (A) was severe and indicates a driver-side offsetfrontal impact, with direct damage of 238 cm continuing down the left side. Direct damage to the front began at the left-front bumper corner and extended 85-cm to the right, resulting in 48-percent vehicle overlap. The maximum crush was 47 cm at the left-front bumper corner.

8 9 10 11 12 Using the WinSMASH crash-reconstruction program and c-values measured for case vehicle (A), the following impact severity was calculated:

		Calculated Velocity Change - kph (mph)			
Vehicle	Variable	Total Longitudinal Latitudinal			
Case Vehicle (A)	delta V	29 (18)	-27 (-17)	10 (6)	

This estimated crash severity is considered to be very low due to the extent of abovebumper damage.

#### **DESCRIPTION OF DAMAGE TO CASE VEHICLE (A)**

#### **Exterior**

13 In the front of case vehicle (A), the bumper and grille area were damaged and pushed rearward into the engine compartment, and the left headlight assembly was broken. 14 The hood was severely crushed, the damaged hood latch had jammed, and both hood hinges were damaged, but not separated. 15 The rear edge of the hood was elevated and it contacted and penetrated the left-lower portion of the windshield. There was about 20% bond separation in the left side of the windshield along with a large tear that extended across the left side of the windshield. 16 There was direct damage to the top of the hood and to the upper portion of the left A-pillar from contact with the rear of vehicle (B). 17 The left side of the roof was severely buckled due to the rearward movement of the upper portion of the left A-pillar.

18 On the left side, the front fender was crushed rearward into the left-front wheel. The left-front wheel rim was bent, the tire was cut and deflated, and the left wheelbase was reduced 5 cm. 19 The upper portion of the left A-pillar was moved rearward and was almost vertical. 20 21 Direct damage extended along the driver door, the door was jammed, and it had been pried open by the rescue personnel. Also, the driver-door glazing was broken. 22 The lower portion of the left A-pillar, and the upper and lower portions of the left B-pillar were also damaged. 23 The left-rear of the van was buckled just behind the driver door, but there was no damage to the upper or lower portions of the C-pillar. 24 25 26 The right fender was deformed and shifted to the left, and the right door was jammed closed. 27 There was no damage to the right wheels and no change in the right wheelbase. 28 There was no other damage to the right side and no damage to the right A-, B-or C-pillars.

<u>29</u> Both rear taillight assemblies were popped out from their attachments. There was no other damage to the rear of case vehicle (A).

#### Interior

30 This vehicle is equipped with a steering-wheel frontal-impact airbag, which deployed during this severe offset-frontal impact. 31 There was no visible damage or contact marks on the driver airbag skin, although it was covered with blood. 32 There was no damage to the steering-wheel spokes or hub. The steering column was rotated slightly up and to the left. 33 34 The interior of the windshield was damaged throughout, the windshield header was damaged, and the interior area of the left A-pillar was displaced to the rear. 35 The roof interior and roof side rail in the driver area were also crushed down. 36 The upper and mid portions of the instrument panel in the driver area were displaced and damaged, and the driver knee bolster was damaged. 37 Also in the driver area, the left-front door, the door hardware, and the door armrest were damaged from the crash. 38 The door window frame was displaced down and the B-pillar was crushed and pushed to the right. 39 The toepan, floor area, and the foot controls in the driver area were also damaged and displaced to the rear. 40 The driver seatback and seat cushion were damaged, and the seat was rotated up and to the right.

41 42 All components on the instrument panel and dashboard were damaged, including the ashtray, control knobs, instruments, vents, ducts, and the center cover over the engine.
43 44 45 The following intrusions were noted and measured:

Location	Component	Distance (cm)	Direction
	toepan	50	to rear
	knee bolster/IP	43	to rear
	A-pillar	38	to rear
left front	kickpanel	37	to right
	roof	34	down
	roof siderail	33	down
	floor	28	up
	B-pillar	27	to right
	steering column	unknown	to rear

#### **OCCUPANT KINEMATICS AND INJURIES**

46 47 The 5-ft, 10-in, 170-lb, 33year-old male driver was wearing the three-point belt, and the steering-wheel airbag deployed. 48 49 50 51 52 Belt use was verified by the fact that the seatbelt was cut and the buckle tab was still in the buckle receiver.

During the frontal impact, the belt-restrained driver moved forward and slightly to the left into the belt restraints and airbag. 53 54 He sustained multiple head injuries from contact with the downward-intruded roof siderail, as evidenced by scuff marks, hair, skin and blood deposits. These head injuries include both basilar and vault skull fractures involving the petrous bone, the right occipital bone, and both right and left temporal bones. He also sustained brain injuries, which include a right subarachnoid hemorrhage and a contusion to the left temporal lobe. He sustained a partial avulsion to the left ear, which included the

cartilage, and a right tympanic membrane rupture with permanent hearing deficit. 37 He sustained multiple spleen lacerations, and a left adrenal tear/hemorrhage, probably due to contact with the driver door/armrest. 55 He sustained a contusion to the medial aspect of the upper right arm, possibly from contact with the steering-wheel rim, as evidenced by a scuff mark on the rim. 56 57 His right and left knees contacted the driver knee bolster as evidenced by scuff marks on either side of the bolster. These contacts resulted in abrasions and lacerations to the medial aspect of the right knee, and a contusion to the medial aspect of the left knee. Additionally, these contacts resulted in a minimally displaced fracture to the posterior rim of the left acetabulum. 58 He sustained a contusion to the anterior aspect of the distal left shin, possibly from contact with the foot controls.

The following table 59 and attached drawing summarize the injuries for the belted driver.

Occupant: Driver	Age: 33 ye	ears	Gender: Male
Restraints: 3-point belt worn; airbag deployed	Stature: 17	78 cm (5 ft, 10 in)	Mass: 77 kg (170 lb)
Injury Description	AIS	Injury	Source

deproyed					
Injury Description	A.I.S.	Injury Source			
_		Definite	Probable	Possible	
Left squamous temporal bone fracture, minimally displaced	3	Roof siderail	_	_	
Bilateral temporal bone fractures, petrous (basilar skull)	4	Roof siderail			
Contusion, left temporal lobe	3	Roof siderail			
Right subarachnoid hemorrhage (cerebral)	3	Roof siderail	_	_	
Avulsion fracture to right occipital condyle	3	Roof siderail	_	_	
Partial avulsion left ear, including cartilage	1	Roof siderail		_	
Right tympanic membrane rupture, decreased hearing	1	Roof siderail		_	
Multiple spleen lacerations with devascularization	4		Driver door panel/armrest	_	
Left adrenal artery injury	3		Driver door panel/armrest	_	
Contusion, medial aspect of upper right arm	1		_	Steering-wheel rim	
Left posterior acetabular rim fracture, minimally displaced	3	Knee bolster		_	
Abrasions and lacerations, medial aspect of right knee	1	Knee bolster/hood release lever	_	_	
Contusion, medial aspect of the left knee	1	Knee bolster	_	_	
Contusion, anterior aspect of the distal left shin	1	_	_	Foot controls	
Maximum A.I.S. Level	4				
Injury Severity Score	41	_	_		

CASE NO. 31746 CASE VEHICLE: 1880 Swige COUPANT, Briver 33 year-old note

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## Vehicle Report

#### General

### Conditions

Variable Number and Name	Code Value	Code Description	Other Options
V206 — Urban/Rural Area	2	Rural	more
V207 — Limited Access Highway	0	No	more
V208 — Road Total Lanes	2	2 lanes	more
V209 — Intersecting Road Total Lanes	8	Not applicable	more
V210 — Road Surface Type	1	Asphalt	<u>more</u>
V211 — Road Defects	0	No	<u>more</u>
V212 — Construction Zone	0	No	more
V213 — Road Alignment Vertical Plane	1	Level	more
V214 — Road Alignment Horizontal Plane	2	Curve	more
V215 — Surface Covering	41	Ice	more
V216 — Visibility Limitation	0	None	<u>more</u>
V217 — Visibility Obstruction	0	None	<u>more</u>
V218 — Speed Limit	6	86-90 km/h 55 mph	more
V219 — Precipitation Type	2	Snow	more
V220 — Precipitation Rate	9	Unknown	<u>more</u>
V221 — Temperature	9	Unknown	more
V222 — Crosswind	9	Unknown	more
V223 — Light Conditions	1	Daylight	more
V224 — Mechanical Malfunction Mention	0	No	more
V225 — Case Vehicle and Object	0	No	more
V226 — Case Vehicle Rollover	0	No	more

V227 — Case Vehicle Ran Off Roadway	0	No	more
V228 — Moving Case Vehicle/Contacted Moving Vehicle	1	Yes	<u>more</u>
V229 — Case Vehicle/Contacted Stopped Vehicle	0	No	<u>more</u>
V230 — Stopped Case Vehicle/Contactd Vehicle	0	No	<u>more</u>
V231 — Total Vehicles Hit By Case Vehicle	1	1 vehicle	<u>more</u>
V232 — Any Fire in Crash	0	No	more
V233 — Max Police Severity-PAR	3	A - Incapacitating Injury	<u>more</u>
V234 — Driver Alcohol Involvement	0	Had not been drinking	more
V235 — Driver Alcohol BAC	80	Not tested	more
V236 — Driver Impairment Mention	0	No	more
V237 — Driven/Towed From Scene	2	Towed Due to Damage	more

#### Other Vehicle

Variable Number and Name	Code Value	Code Description	Other Options
V301 — Other Vehicle VIN	1FDWK84E1RVA	_	_
V302 — Other Vehicle Manufacturer/Body Code	12134	_	_
V303 — Other Vehicle Manufacturer	121	Ford	more
V304 — Other Vehicle Body Code	34	Straight truck	more
V305 — Other Vehicle Make/Model	3183	_	
V306 — Other Vehicle Model Year	1994	_	_
V307 — Other Vehicle Mass	999999	Unknown	more
V308 — Other Vehicle Number	0	No separate report	more
V309 — Other Vehicle Number of Occupants	01	_	_
V310 — Other Vehicle Traveling Speed	999	Unknown	more
V311 — Highest Police Injury Severity	1	C - Possible Injury	more
V312 — Other Vehicle Type	39	Truck (or semi) and full trailer(s)	more
V313 — Other Vehicle Wheelbase (cm)	999	Unknown wheelbase	more
V314 — Average Track Width	999	Unknown	more
V315 — Overall Length	999	Unknown	more
V316 — Overall Width (OAW)	999	Unknown	more
V317 — Front Overhang (FOH)	999	Unknown	more
V318 — Rear Overhang (ROH)	999	Unknown	more
V319 — Undeformed End Width (UEW)	999	Unknown	more
V320 — Engine Displacement	8.3 <i>l</i>		_
V321 — Engine: Number of Cylinders	06	_	_
V322 — Direct Damage Length (DDL)	999	Unknown	more
V323 — Front-End Overlap % (FEO)	99	Missing or Not applicable	more
V324 — Vehicle Overlap % (VOL)	99	Missing or Not applicable	more

#### General

Variable Number and Name	Code Value	Code Description	Other Options
V401 — VIN	2B7HB11X0XK5	_	_
V402 — Manufacturer/Body Code	13211	_	_
V403 — Vehicle Manufacturer	132	Dodge	more
V404 — Vehicle Body Code	11	_	_
V405 — Make/Model Code	3218	Ram Van 1500/2500/3500	more
V406 — Model Year	1999	_	_
V407 — Vehicle Mass	001863 kg	_	_
V408 — Odometer Reading	999999	Unknown	more
V409 — Number of Occupants	01	_	_
V410 — Traveling Speed	999	Unknown	more
V411 — Body Type	25	Van (large)	more
V412 — Stolen Vehicle	8	Not currently collected	more
V413 — Body Structure	2	Unitized	more
V414 — Transmission Type	1	Automatic	more
V415 — Transmission Lever Location	3	Column	more
V416 — Steering	1	Power	more
V417 — Brakes	1	Power	more
V418 — Brake Type	2	Disc - front wheels	more
V419 — Brake Anti-lock Device	0	None installed	more
V420 — Air Conditioning in Vehicle	8	Not currently collected	more
V421 — Drive Type	1	Rear wheel	more
V422 — Dual Rear Wheels	0	No	more
V423 — Original Restraint System	3	Airbag	more

Туре			
V424 — Equipped With Roll Bar	0	No	<u>more</u>
V425 — Roof Type	1	Solid	more
V426 — Wheelbase	278 cm	_	_
V427 — Anti-lacerative Glass	0	None	more
V428 — Average Track Width	170 cm	_	
V429 — Overall Length	489 cm	_	
V430 — Overall Width (OAW)	200 cm	_	_
V431 — Front Overhang	097 cm	_	_
V432 — Rear Overhang	114 cm	_	
V433 — Undeformed End Width (UEW)	180 cm	_	_
V434 — Engine Displacement	3.9 <i>l</i>	_	_
V435 — Engine: Number of Cylinders	06	_	_
V436 — Direct Damage Length (DDL)	085 cm	_	_
V437 — Front End Overlap % (FEO)	47	_	
V438 — Vehicle Overlap % (VOL)	48	_	_

### Damage

### Description

Variable Number and Name	Code Value	Code Description	Other Options
V501 — Maximum Crush - Front	047 cm	_	
V502 — Maximum Crush - Right Side	000 cm	No crush (or less than 1 cm.)	more
V503 — Maximum Crush - Rear	000 cm	No crush (or less than 1 cm.)	more
V504 — Maximum Crush - Left Side	000 cm	No crush (or less than 1 cm.)	more
V505 — Maximum Crush - Roof	000 cm	No crush (or less than 1 cm.)	more
V506 — Maximum Crush - Other	000 cm	No crush (or less than 1 cm.)	more
V507 — Are Events In Chronological Order	1	Yes	more
V508 — Event 1 Impact Location	1	On Roadway	more
V509 — Event 1 Impact Configuration	13	FRONT of case veh - SIDE of contacted Vehicle	more
V510 — Event 1 Object/Vehicle Contacted	34	Straight truck	more
V511 — Event 2 Impact Location	8	No 2nd event	more
V512 — Event 2 Impact Configuration	88	No 2nd event	more
V513 — Event 2 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V514 — Event 3 Impact Location	8	No 3rd event	more
V515 — Event 3 Impact Configuration	88	No 3rd event	more
V516 — Event 3 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V517 — Event 4 Impact Location	8	No 4th event	more
V518 — Event 4 Impact Configuration	88	No 4th event	more
V519 — Event 4 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V520 — Event 5 Impact Location	8	No 5th event	more
V521 — Event 5 Impact Configuration	88	No 5th event	more
V522 — Event 5 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V523 — Event 6 Impact Location	8	No 6th event	more

V524 — Event 6 Impact Configuration	88	No 6th event	more
V525 — Event 6 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V526 — Event 7 Impact On Road	8	No 7th event	more
V527 — Event 7 Impact Configuration	88	No 7th event	more
V528 — Event 7 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V529 — Primary CDC Case Vehicle -event Number	1	Event 1	<u>more</u>
V530 — Primary CDC Case Vehicle - impact speed	999	Unknown	more
V531 — Primary CDC Case Vehicle - Estimated By	1	Investigator	more
V532 — Primary CDC Case Vehicle -crush	047	_	
V533 — Primary CDC Case Vehicle -clock #1	11	11 o'clock	more
V534 — Primary CDC Case Vehicle letter 1 #1	06	F - Front	<u>more</u>
V535 — Primary CDC Case Vehicle letter 2 #1	25	Y - Side or end (F + P or L + C)	<u>more</u>
V536 — Primary CDC Case Vehicle letter 3 #1	01	A - All	more
V537 — Primary CDC Case Vehicle letter 4 #1	23	W - Wide impact area	more
V538 — Primary CDC Case Vehicle Extent #1	04	Extent 4	more
V539 — Primary CDC Case Vehicle -CDC #1	11FYAW4	_	_
V541 — Primary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V542 — Primary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V543 — Primary CDC Case Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V544 — Primary CDC Case Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V545 — Primary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V546 — Primary CDC Case Vehicle -CDC #2	9800000		_
V547 — Primary CDC Contacted Vehicle - Impact Speed	999	Unknown	<u>more</u>
V548 — Primary CDC Contacted Vehicle - Estimated By	1	Investigator	more
V549 — Primary CDC Contacted Vehicle -crush	999	Unknown	<u>more</u>
V550 — Primary CDC Contacted Vehicle -clock #1	99	Unknown or no damage	more

00	Missing Data/Not applicable	<u>more</u>
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
9900000	_	_
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
9900000	_	_
8	Not applicable	more
998	Not Applicable	more
8	Not applicable (no vehicle/no impact)	more
998	Not Applicable	more
98	Not Applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
00	Missing Data/Not applicable	more
9800000	_	_
	OO	Missing Data/Not applicable  Mot applicable  Not applicable  Not Applicable  Missing Data/Not applicable

V576 — Secondary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V577 — Secondary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	<u>more</u>
V578 — Secondary CDC Case Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V579 — Secondary CDC Case Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V580 — Secondary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V581 — Secondary CDC Case Vehicle -CDC #2	9800000	_	
V582 — Secondary CDC Contacted Vehicle - Impact Speed	998	Not Applicable	more
V583 — Secondary CDC Contacted Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	more
V584 — Secondary CDC Contacted Vehicle - crush	998	Not Applicable	more
V585 — Secondary CDC Contacted Vehicle - clock #1	98	Not Applicable	more
V586 — Secondary CDC Contacted Vehicle letter 1 #1	00	Missing Data/Not applicable	<u>more</u>
V587 — Secondary CDC Contacted Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V588 — Secondary CDC Contacted Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V589 — Secondary CDC Contacted Vehicle letter 4 #1	00	Missing Data/Not applicable	more
V590 — Secondary CDC Contacted Vehicle Extent #1	00	Missing Data/Not applicable	more
V591 — Secondary CDC Contacted Vehicle - CDC #1	9800000	_	
V593 — Secondary CDC Contacted Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V594 — Secondary CDC Contacted Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V595 — Secondary CDC Contacted Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V596 — Secondary CDC Contacted Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V597 — Secondary CDC Contacted Vehicle Extent #2	00	Missing Data/Not applicable	more
V598 — Secondary CDC Contacted Vehicle - CDC #2	9800000	_	

### **Crash Severity**

Variable Number and Name	Code Value	Code Description	Other Options
V601 — Case Vehicle Primary Impact Number	1	_	_
V602 — Primary Impact Total Delta-V	029 kph	_	_
V603 — Primary Case Vehicle Reconstructed Longitudinal Delta-V	-027 kph	_	_
V604 — Primary Case Vehicle Reconstructed Lateral Delta-V	0010 kph	_	_
V605 — Primary Case Vehicle Reconstructed Crush Energy	0718 kJ	_	_
V606 — Primary Impact Case Vehicle - reconstuction	21	Reconstructed, low confidence level	more
V607 — Primary Case Vehicle Reconstruction Mode	2	CDC & detailed damage	more
V608 — Primary Contacted Vehicle Reconstructed Total Delta-V	999	Unknown	more
V609 — Primary Contacted Vehicle Reconstructed Longitudinal Delta-V	9999	_	_
V610 — Primary Contacted Vehicle Reconstructed Lateral Delta-V	9999	_	_
V611 — Primary Contacted Vehicle Reconstructed Crush Energy	9999	_	_
V612 — Case Vehicle Secondary Impact Number	8	_	_
V613 — Secondary Case Vehicle Reconstructed Total Delta-V	888	N/A	more
V614 — Secondary Case Vehicle Reconstructed Longitudinal Delta-V	8888	_	
V615 — Secondary Case Vehicle Reconstructed Lateral Delta-V	8888	_	_
V616 — Secondary Case Vehicle Reconstructed Crush Energy	8888	_	_
V617 — Secondary Case Vehicle Reconstruction Note	88	_	_
V618 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	more
V619 — Secondary Contacted Vehicle	888	N/A	more

8888	_	_
8888	_	
8888	_	
1	_	_
029 kph	_	
-027 kph	_	
0010 kph	_	
0718 kJ	_	
21	Reconstructed, low confidence level	more
2	CDC & detailed damage	more
999	Unknown	more
9999	_	_
9999	_	
9999	_	
8	Not applicable	more
888	N/A	more
8888	_	_
8888	_	
8888	_	
	8888  8888  1  029 kph  -027 kph  0010 kph  0718 kJ  21  2  999  9999  9999  9999  88  888  8	8888

V640 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	<u>more</u>
V641 — Secondary Contacted Vehicle Reconstruction Total EBS	888	N/A	<u>more</u>
V642 — Secondary Contacted Vehicle Reconstruction Longitudinal EBS	8888	_	—
V643 — Secondary Contacted Vehicle Reconstruction Lateral EBS	8888	_	_
V644 — Secondary Contacted Vehicle Reconstruction Crush Energy	8888		
V645 — Case Vehicle Reconstructed Impact Number	1	_	
V646 — Case Vehicle Impact 1 Plane	1	Bumper	<u>more</u>
V647 — Case Vehicle Impact 1 Direct Damage Length [DDL]	085 cm	_	_
V648 — Case Vehicle Impact 1 Max Crush	047 cm	_	<u>—</u>
V649 — Case Vehicle Impact 1 Field-L	162 cm	_	_
V650 — Case Vehicle Impact 1 C1	047 cm	_	
V651 — Case Vehicle Impact 1 C2	026 cm	_	_
V652 — Case Vehicle Impact 1 C3	018 cm	_	_
V653 — Case Vehicle Impact 1 C4	014 cm	_	_
V654 — Case Vehicle Impact 1 C5	006 cm	_	_
V655 — Case Vehicle Impact 1 C6	010 cm	_	_
V656 — Case Vehicle Impact 1 +/- D	-048 cm	_	—
V657 — Case Vehicle Reconstructed Impact Number	1	_	_
V658 — Case Vehicle Impact 2 Plane	9	Unknown	more
V659 — Case Vehicle Impact 2 Direct Damage Length [DDL]	999	Unknown	more
V660 — Case Vehicle Impact 2 Max Crush	999	Unknown	more
V661 — Case Vehicle Impact 2 Field-L	999	Unknown	<u>more</u>
V662 — Case Vehicle Impact 2 C1	999	Unknown	<u>more</u>
V663 — Case Vehicle Impact 2 C2	999	Unknown	<u>more</u>
V664 — Case Vehicle Impact 2 C3	999	Unknown	<u>more</u>

V665 — Case Vehicle Impact 2 C4	999	Unknown	more
V666 — Case Vehicle Impact 2 C5	999	Unknown	more
V667 — Case Vehicle Impact 2 C6	999	Unknown	more
V668 — Case Vehicle Impact 2 +/- D	0999 cm	_	_
V669 — Other Vehicle Reconstructed Impact Number	2	_	_
V670 — Other Vehicle Impact 1 Plane	8	Not applicable	more
V671 — Other Vehicle Impact 1 Direct Damage Length [DDL]	998	Not applicable	<u>more</u>
V672 — Other Vehicle Impact 1 Max Crush	998	Not applicable	more
V673 — Other Vehicle Impact 1 Field-L	998	Not applicable	more
V674 — Other Vehicle Impact 1 C1	998	Not applicable	more
V675 — Other Vehicle Impact 1 C2	998	Not applicable	more
V676 — Other Vehicle Impact 1 C3	998	Not applicable	more
V677 — Other Vehicle Impact 1 C4	998	Not applicable	more
V678 — Other Vehicle Impact 1 C5	998	Not applicable	more
V679 — Other Vehicle Impact 1 C6	998	Not applicable	more
V680 — Other Vehicle Impact 1 +/- D	9998	_	_
V681 — Other Vehicle Reconstructed Impact Number	2	_	_
V682 — Other Vehicle Impact 2 Plane	8	Not applicable	more
V683 — Other Vehicle Impact 2 Direct Damage Length [DDL]	998	Not applicable	<u>more</u>
V684 — Other Vehicle Impact 2 Max Crush	998	Not applicable	more
V685 — Other Vehicle Impact 2 Field-L	998	Not applicable	more
V686 — Other Vehicle Impact 2 C1	998	Not applicable	more
V687 — Other Vehicle Impact 2 C2	998	Not applicable	more
V688 — Other Vehicle Impact 2 C3	998	Not applicable	more
V689 — Other Vehicle Impact 2 C4	998	Not applicable	more
V690 — Other Vehicle Impact 2 C5	998	Not applicable	more
V691 — Other Vehicle Impact 2 C6	998	Not applicable	more
V692 — Other Vehicle Impact 2 +/- D	9998	_	

#### Tires & Rims

Variable Number and Name	Code Value	Code Description	Other Options
V701 — Left Front Wheel Damaged	1	Yes	more
V702 — Right Front Wheel Damaged	0	No	more
V703 — Right Rear Wheel Damaged	0	No	more
V704 — Left Rear Wheel Damaged	0	No	more
V705 — Left Front Tire Tread Type	4	All Weather	more
V706 — Right Front Tire Tread Type	4	All Weather	more
V707 — Right Rear Tire Tread Type	4	All Weather	more
V708 — Left Rear Tire Tread Type	4	All Weather	<u>more</u>
V709 — Left Front Carcass Construction	3	Radial	more
V710 — Right Front Carcass Construction	3	Radial	more
V711 — Right Rear Carcass Construction	3	Radial	more
V712 — Left Rear Carcass Construction	3	Radial	more
V717 — Left Front Tire Size	P22575R16	_	_
V718 — Right Front Tire Size	P22575R16	_	_
V719 — Right Rear Tire Size	P22575R16	_	_
V720 — Left Rear Tire Size	P22575R16	_	_

### Fuel, Tank, Fire

Variable Number and Name	Code Value	Code Description	Other Options
V801 — Propulsive Fuel Type	1	Gasoline	more
V802 — Main Tank Location	322	Within frame/centered laterally - within vertically	<u>more</u>
V803 — Main Filler Cap Location	113	Left of frame laterally - above vertically	more
V804 — Main Tank Material	9	Unknown	more
V805 — Aux Tank Type	8	Not applicable (not equipped)	more
V806 — Aux Tank Location	888	Not applicable (not equipped)	more
V807 — Aux Filler Cap Location	888	Not applicable (not equipped)	more
V808 — Aux Tank Material	8	Not applicable	more
V901 — Fuel Leakage From Crash	0	No	more
V1001 — Fire In Or On Case Vehicle	0	No	more

#### **Exterior**

Variable Number and Name	Code Value	Code Description	Other Options
V1101 — Hood Latch Released	0	No	<u>more</u>
V1102 — Hood Latch Damaged	1	Yes	<u>more</u>
V1103 — Hood Latch Jammed	1	Yes	more
V1104 — Left Hood Hinge Damaged	1	Yes	more
V1105 — Left Hood Hinge Separated	0	No	more
V1106 — Right Hood Hinge Damaged	1	Yes	more
V1107 — Right Hood Hinge Separated	0	No	<u>more</u>
V1108 — Hood Remained On Vehicle	1	Yes	more
V1109 — Rear Hood Edge Elevated	1	Yes	more
V1110 — Edge Contacted Windshield	1	Yes	more
V1111 — Edge Penetrated Windshield	1	Yes	more
V1112 — Hood Latch Location	1	Front of Vehicle	more
V1113 — Eng/Transmissn Mount Separation	0	No	more
V1114 — Steerng Column Flex Coupling	9	Unknown if equipped	more
V1115 — Steerng Column Coupling Damaged	9	Unknown	<u>more</u>
V1116 — Steerng Column Coupling Separated	9	Unknown	more
V1117 — Eng Comp Telescopng Unit	88	Not collected	more
V1118 — Comp Orig/Telescopd Diff	888	Not collected	more
V1119 — Left Side Body Mount Separation	8	Not applicable (unitized)	more
V1120 — Upper Left A-pillar Separation	4	No separation, but damaged	more
V1121 — Lower Left A-pillar Separation	4	No separation, but damaged	more
V1122 — Upper Left B-pillar Separation	4	No separation, but damaged	more
V1123 — Lower Left B-pillar Separation	4	No separation, but damaged	more
V1124 — Upper Left C-pillar Separation	0	No	more
V1125 — Lower Left C-pillar Separation	0	No	more

V1126 — Upper Left D-pillar Separation	8	Not applicable (not equipped)	more
V1127 — Lower Left D-pillar Separation	8	Not applicable (not equipped)	more
V1128 — Left Front Door Opening Cause	0	Door did not open	<u>more</u>
V1129 — Left Rear Door Opening Cause	8	Not applicable (no left rear door)	more
V1130 — Left Front Door Jammed Closed	1	Yes	more
V1131 — Left Rear Door Jammed Closed	8	Not applicable (no left rear door)	more
V1132 — Rear Door Type	6	Double door	<u>more</u>
V1133 — Rear Door Opening Cause	0	Door did not open	<u>more</u>
V1134 — Rear Door Jammed Closed	0	No	more
V1135 — Luggage Partition Damagd	8	Not applicable	more
V1136 — Spare Tire Status	8	Not collected	more
V1137 — Trailer Hitch Type	0	No hitch	more
V1138 — Trailer Type	0	No trailer	more
V1139 — Right Side Body Mount Separation	8	Not applicable (unitized)	more
V1140 — Upper Right A-pillar Separation	1	Yes	more
V1141 — Lower Right A-pillar Separation	1	Yes	more
V1142 — Upper Right B-pillar Separation	0	No	more
V1143 — Lower Right B-pillar Separation	0	No	more
V1144 — Upper Right C-pillar Separation	0	No	more
V1145 — Lower Right C-pillar Separation	0	No	more
V1146 — Upper Right D-pillar Separation	8	Not applicable (not equipped)	more
V1147 — Lower Right D-pillar Separation	8	Not applicable (not equipped)	<u>more</u>
V1148 — Right Front Door Opening Cause	00	Door did not open	<u>more</u>
V1149 — Right Rear Door Opening Cause	98	Not applicable (no right rear door)	<u>more</u>
V1150 — Right Front Door Jammed Closed	1	Yes	more
V1151 — Right Rear Door Jammed Closed	8	Not applicable (no right rear door)	more

V1152 — Van Rear Door Type	0	Van, no right-rear door	more
V1153 — Windshield Cracked		Yes	more
V1154 — Windshield Broken	1	Yes	more
V1155 — Windshield Cracked or Broken by Occupant	0	No	more
V1156 — Bond Separation Extent	1	1 - 20%	more
V1157 — Windshield Code		_	
V1158 — Did Sun/T Roof Open	8	Not Applicable	<u>more</u>

### Steering

### Column/Rim

Variable Number and Name	Code Value	Code Description	Other Options
V1201 — Steering Wheel Rim Damage	0	None	more
V1202 — Number of Steering Wheel Spokes	4	4 spokes	more
V1203 — Steering Wheel Spoke Damage	0	None	more
V1204 — Column Tilt Feature	1	Yes, equipped (position unknown)	more
V1205 — Column Swing-away Feature	0	Not equipped	more
V1206 — Column Telescoping Feature	0	Not equipped	more
V1207 — Wheel Energy Absorb Device	8	Not collected	more
V1208 — Wheel Ea Orig/Damaged Diff	888	Not collected	more
V1209 — Column Energy Absorb Device	88	Not collected	more
V1210 — Column Ea Orig/Comprss Diff	888	Not collected	more
V1211 — Shear Capsule Separation	888	Not collected	more
V1212 — Column Vertical Rotation	1	Upward apparent rotation	more
V1213 — Column Lateral Rotation	1	Left apparent rotation	more
V1214 — Steering Wheel Hub Damage	0	None	more

#### Intrusion

Variable Number and Name	Code Value	Code Description	Other Options
V1301 — Occupant Compartment Intrusion	1	Yes	more
V1302 — Was Intrusion Catastrophic	0	No	more
V1303 — Intrusion Number 01	01	Intrusion #1	more
V1304 — Intrusion 01 Occupant Space Number	11	First row, Left seat	more
V1305 — Intrusion 01 Intruding Object	03	Toe pan	more
V1306 — Intrusion 01 Assoc Event Number	1	Event #1	more
V1307 — Intrusion 01 Max Intrusion X-axis	50 cm	_	
V1308 — Intrusion 01 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1309 — Intrusion 01 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1310 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1311 — Intrusion 01 Injury Number	00	No injury or no intrusion	more
V1312 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1313 — Intrusion 01 Injury Number	00	No injury or no intrusion	more
V1314 — Intrusion Number 02	02	Intrusion #2	more
V1315 — Intrusion 02 Occupant Space Number	11	First row, Left seat	more
V1316 — Intrusion 02 Intruding Object	01	Instrument panel	more
V1317 — Intrusion 02 Assoc Event Number	1	Event #1	more
V1318 — Intrusion 02 Max Intrusion X-axis	43 cm	_	_
V1319 — Intrusion 02 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1320 — Intrusion 02 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1321 — Intrusion 02 Occupant Number	01	Occupant number 1, contact	more
V1322 — Intrusion 02 Injury Number	11	Injury #11	more
V1323 — Intrusion 02 Occupant Number	01	Occupant number 1, contact	more
V1324 — Intrusion 02 Injury Number	12	Injury #12	more

V1325 — Intrusion Number 03	03	Intrusion #3	more
V1326 — Intrusion 03 Occupant Space Number	11	First row, Left seat	more
V1327 — Intrusion 03 Intruding Object	08	A-pillar	more
V1328 — Intrusion 03 Assoc Event Number	1	Event #1	more
V1329 — Intrusion 03 Max Intrusion X-axis	38 cm		
V1330 — Intrusion 03 Max Intrusion Y-axis	37 cm	_	
V1331 — Intrusion 03 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1332 — Intrusion 03 Occupant Number	00	No contact or no intrusion	more
V1332 — Intrusion 03 Occupant Number  V1333 — Intrusion 03 Injury Number	00	No injury or no intrusion	
V1334 — Intrusion 03 Occupant Number		No contact or no intrusion	more
	00		more
V1335 — Intrusion 03 Injury Number	00	No injury or no intrusion	more
V1336 — Intrusion Number 04	04	Intrusion #4	more
V1337 — Intrusion 04 Occupant Space Number	11	First row, Left seat	more
V1338 — Intrusion 04 Intruding Object	29	Side footwell panel (kickpanel)	more
V1339 — Intrusion 04 Assoc Event Number	1	Event #1	more
V1340 — Intrusion 04 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1341 — Intrusion 04 Max Intrusion Y-axis	37 cm	_	
V1342 — Intrusion 04 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1343 — Intrusion 04 Occupant Number	00	No contact or no intrusion	more
V1344 — Intrusion 04 Injury Number	00	No injury or no intrusion	more
V1345 — Intrusion 04 Occupant Number	00	No contact or no intrusion	more
V1346 — Intrusion 04 Injury Number	00	No injury or no intrusion	more
V1347 — Intrusion Number 05	05	Intrusion #5	more
V1348 — Intrusion 05 Occupant Space Number	11	First row, Left seat	more
V1349 — Intrusion 05 Intruding Object	15	Roof or convertible top	more
V1350 — Intrusion 05 Assoc Event Number	1	Event #1	more
V1351 — Intrusion 05 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1352 — Intrusion 05 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1353 — Intrusion 05 Max Intrusion Z-axis	34 cm	_	

V1354 — Intrusion 05 Occupant Number	00	No contact or no intrusion	more
V1355 — Intrusion 05 Injury Number	00	No injury or no intrusion	more
V1356 — Intrusion 05 Occupant Number	00	No contact or no intrusion	more
V1357 — Intrusion 05 Injury Number	00	No injury or no intrusion	more
V1358 — Intrusion Number 06	06	Intrusion #6	more
V1359 — Intrusion 06 Occupant Space Number	11	First row, Left seat	more
V1360 — Intrusion 06 Intruding Object	14	Roof side rails	more
V1361 — Intrusion 06 Assoc Event Number	1	Event #1	more
V1362 — Intrusion 06 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1363 — Intrusion 06 Max Intrusion Y-axis	33 cm	_	_
V1364 — Intrusion 06 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1365 — Intrusion 06 Occupant Number	01	Occupant number 1, contact	more
V1366 — Intrusion 06 Injury Number	01	Injury #1	more
V1367 — Intrusion 06 Occupant Number	01	Occupant number 1, contact	more
V1368 — Intrusion 06 Injury Number	02	Injury #2	more
V1369 — Intrusion Number 07	07	Intrusion #7	more
V1370 — Intrusion 07 Occupant Space Number	11	First row, Left seat	more
V1371 — Intrusion 07 Intruding Object	04	Floor pan	more
V1372 — Intrusion 07 Assoc Event Number	1	Event #1	more
V1373 — Intrusion 07 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1374 — Intrusion 07 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1375 — Intrusion 07 Max Intrusion Z-axis	28 cm	_	_
V1376 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1377 — Intrusion 07 Injury Number	00	No injury or no intrusion	more
V1378 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1379 — Intrusion 07 Injury Number	00	No injury or no intrusion	more
V1380 — Intrusion Number 08	08	Intrusion #8	more
V1381 — Intrusion 08 Occupant Space Number	11	First row, Left seat	more
V1382 — Intrusion 08 Intruding Object	11	B-pillar	more

V1383 — Intrusion 08 Assoc Event Number	1	Event #1	more
V1384 — Intrusion 08 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1385 — Intrusion 08 Max Intrusion Y-axis	27 cm	_	
V1386 — Intrusion 08 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1387 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1388 — Intrusion 08 Injury Number	00	No injury or no intrusion	more
V1389 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1390 — Intrusion 08 Injury Number	00	No injury or no intrusion	more
V1391 — Intrusion Number 09	00	No Intrusion, None	more
V1392 — Intrusion 09 Occupant Space Number	00	No Intrusion, None	more
V1393 — Intrusion 09 Intruding Object	00	No Intrusion, None	more
V1394 — Intrusion 09 Assoc Event Number	0	No Intrusion, None	more
V1395 — Intrusion 09 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1396 — Intrusion 09 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1397 — Intrusion 09 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1398 — Intrusion 09 Occupant Number	00	No contact or no intrusion	more
V1399 — Intrusion 09 Injury Number	00	No injury or no intrusion	more
V1400 — Intrusion 09 Occupant Number	00	No contact or no intrusion	more
V1401 — Intrusion 09 Injury Number	99	Contact, injury unknown or data not collected	<u>more</u>
V1402 — Intrusion Number 10	00	No Intrusion, None	more
V1403 — Intrusion 10 Occupant Space Number	00	No Intrusion, None	more
V1404 — Intrusion 10 Intruding Object	00	No Intrusion, None	more
V1405 — Intrusion 10 Assoc Event Number	0	No Intrusion, None	more
V1406 — Intrusion 10 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1407 — Intrusion 10 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1408 — Intrusion 10 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1409 — Intrusion 10 Occupant Number	00	No contact or no intrusion	more
V1410 — Intrusion 10 Injury Number	00	No injury or no intrusion	more
V1411 — Intrusion 10 Occupant Number	00	No contact or no intrusion	more

V1412 — Intrusion 10 Injury Number	99	Contact, injury unknown or data not collected	more
V1413 — Door Intrusion Number 01	88	Not Applicable	more
V1414 — Door Intrusion Number 01 Cause	8	Not applicable	more
V1415 — Door Intrusion Number 02	88	Not Applicable	more
V1416 — Door Intrusion Number 02 Cause	8	Not applicable	more
V1417 — Door Intrusion Number 03	88	Not Applicable	more
V1418 — Door Intrusion Number 03 Cause	8	Not applicable	more
V1419 — Door Intrusion 01 Component	88	Not Applicable	more
V1420 — Door Intrusion 01 Component Damaged 1	8	Not Applicable	more
V1421 — Door Intrusion 01 Component Damaged 2	8	Not Applicable	more
V1422 — Door Intrusion 02 Component	88	Not Applicable	more
V1423 — Door Intrusion 02 Component Damaged	8	Not Applicable	more
V1424 — Door Intrusion 02 Component Damaged 2	8	Not Applicable	more
V1425 — Door Intrusion 03 Component	88	Not Applicable	more
V1426 — Door Intrusion 03 Component Damaged	8	Not Applicable	more
V1427 — Door Intrusion 03 Component Damaged 2	8	Not Applicable	more
V1428 — Door Intrusion 04 Component	88	Not Applicable	more
V1429 — Door Intrusion 04 Component Damaged	8	Not Applicable	more
V1430 — Door Intrusion 04 Component Damaged 2	8	Not Applicable	more

### Airbag(s)

Variable Number and Name	Code Value	Code Description	Other Options
V1501 — Driver Airbag Equipped	1	Yes	<u>more</u>
V1502 — Driver Airbag Deployed	1	Yes	<u>more</u>
V1503 — Driver Airbag Condition	0	No Damage	more
V1504 — Passenger Airbag Equip	0	No	<u>more</u>
V1505 — Passenger Airbag Deployed	8	Not Applicable (not equipped/not deployed)	<u>more</u>
V1506 — Passenger Airbag Condition	8	Not Applicable (not equipped/not deployed)	<u>more</u>
V1507 — Steering Wheel Airbag Tether	1	Yes	<u>more</u>
V1508 — Driver Airbag Marked By Contact	0	No	<u>more</u>
V1509 — Passenger Airbag Tether	8	Not applicable (no airbag, not equipped, not deployed)	<u>more</u>
V1510 — Passenger Airbag Marked By Contact	8	Not applicable (no airbag, not equipped, not deployed)	more

#### **Interior**

Variable Number and Name	Code Value	Code Description	Other Options
V1601 — Left Front Door Damaged	1	Yes	more
V1602 — Right Front Door Damaged	0	No	more
V1603 — Left Front Hardware Damaged	1	Yes	more
V1604 — Right Front Hardware Damaged	0	No	more
V1605 — Left Front Armrest Damaged	1	Yes	more
V1606 — Right Front Armrest Damaged	0	No	more
V1607 — Left Front Glass Damaged	1	Yes	more
V1608 — Right Front Glass Damaged	0	No	more
V1609 — Left Rear Door Area Damaged	8	Not applicable	more
V1610 — Right Rear Door Area Damaged	8	Not applicable	more
V1611 — Left Rear Hardware Damaged	8	Not applicable	more
V1612 — Right Rear Hardware Damaged	8	Not applicable	more
V1613 — Left Rear Armrest Damaged	8	Not applicable	more
V1614 — Right Rear Armrest Damaged	8	Not applicable	more
V1615 — Left Rear Glass Damaged	8	Not applicable	more
V1616 — Right Rear Glass Damaged	8	Not applicable	more
V1617 — Left Roof Side Rail Damaged	4	Yes, occupant contact	more
V1618 — Right Roof Side Rail Damaged	0	No	more
V1619 — Left B-pillar Damaged	1	Yes	more
V1620 — Right B-pillar Damaged	0	No	more
V1621 — Left C-pillar Damaged	0	No	more
V1622 — Right C-pillar Damaged	0	No	more
V1623 — Left D-pillar Damaged	8	Not applicable	more
V1624 — Right D-pillar Damaged	8	Not applicable	more
V1625 — Left Headlining Damaged	8	Not applicable	more

V1626 — Right Headlining Damaged	8	Not applicable	more
V1627 — Left Roof Structure Damaged	4	Yes, occupant contact	more
V1628 — Right Roof Structure Damaged	0	No	more
V1629 — Left T/Sun Roof Damaged	8	Not applicable	more
V1630 — Right T/Sun Roof Damaged	8	Not applicable	more
V1631 — Other Left Side Item Damagd	8	Not applicable	more
V1632 — Other Right Side Item Damagd	8	Not applicable	more
V1633 — Foot Controls Damaged	1	Yes	more
V1634 — Ignition Key Damaged	1	Yes	more
V1635 — Rear View Mirror Damaged	1	Yes	more
V1636 — Sunvisor/Fitting Damaged	0	No	more
V1637 — Windshield Molding Damaged	0	No	more
V1638 — Left A-pillar Damaged	4	Yes, occupant contact	more
V1639 — Right A-pillar Damaged	0	No	more
V1640 — Center Console Damaged	0	No	more
V1641 — Transmission Lever Damaged	0	No	more
V1642 — Horn/Spoke Shroud Damagd	0	No	more
V1643 — Upper Panel Damaged	1	Yes	more
V1644 — Mid Panel Damaged	4	Yes, occupant contact	more
V1645 — Lower Panel Damaged	4	Yes, occupant contact	more
V1646 — Ashtray Damaged	1	Yes	more
V1647 — Control Knob/Lever Damaged	1	Yes	more
V1648 — Glove Compartment Area Damaged	0	No	more
V1649 — Instruments Damaged	1	Yes	more
V1650 — Park Brake Release Damaged	0	No	more
V1651 — Park Brake Pedal Damaged	1	Yes	more
V1652 — A/C Or Upper Vent Damaged	1	Yes	more
V1653 — Heater Or A/C Duct Damaged	1	Yes	more
V1654 — Radio Damaged	0	No	more
V1655 — Other Item Damaged	8	Not applicable	more

V1656 — Rear Window Damaged	0	No	more
V1657 — Rear Window Header Damaged	0	No	more
V1658 — Vertical Console Damaged	1	Yes	more
V1659 — Roof Console Damaged	8	Not applicable	more

#### Case Vehicle

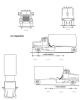
#### **Seats**

Variable Number and Name	Code Value	Code Description	Other Options
V1701 — Driver Front Seat Type	05	Bucket	more
V1702 — Passenger Front Seat Type	05	Bucket	more
V1703 — Driver Seat Mount Type	2	Pedestal	more
V1704 — Passenger Seat Mount Type	2	Pedestal	more
V1705 — Driver Swivel Mechanism Equipped	0	No	more
V1706 — Passenger Swivel Mechanism Equipped	0	No	more
V1707 — Driver Seat Original Equipment	1	Yes	more
V1708 — Passenger Seat Original Equipment	1	Yes	more
V1709 — Driver Seat/Rear Occupant Contact	8	Not applicable	more
V1710 — Passenger Seat/Rear Occupant Contact	8	Not applicable	more
V1711 — Driver Seat Damage	3	Backrest and cushion damaged	more
V1712 — Passenger Seat Damage	0	None	more
V1713 — Center Front Armrest Damaged	8	Not applicable (no center armrest)	more
V1714 — Driver Seat Rotation	5	Multiple rotations	more
V1715 — Passenger Seat Rotation	0	None apparent	more
V1716 — Driver Seat-back Type	2	Rigid	more
V1717 — Passenger Seat-back Type	2	Rigid	more
V1718 — Driver Seat-back Lock Type	0	None (rigid)	more
V1719 — Passenger Seat-back Lock Type	0	None (rigid)	more
V1720 — Driver Seat-back Lock Held	8	Not applicable	more
V1721 — Passenger Seat-back Lock Held	8	Not applicable	more
V1722 — Driver Recliner Mechanism Held	8	Not applicable	more
V1723 — Passenger Recliner Mechanism Held	8	Not applicable	more

V1724 — Driver Head Restraint Type	2	Integral	more
V1725 — Passenger Head Restraint Type	2	Integral	more
V1726 — Driver Head Rest Removed	8	Not applicable	more
V1727 — Passenger Head Rest Removed	8	Not applicable	more
V1728 — Driver Head Rest Adjustment	8	Not applicable	more
V1729 — Passenger Head Rest Adjustment	8	Not applicable	more
V1730 — Driver Head Rest Damage	1	Damaged but not separated	more
V1731 — Passenger Head Rest Damage	0	None	more
V1732 — Driver Seat Adjustment Type	0	None (rigid)	more
V1733 — Passenger Seat Adjustment Type	0	None (rigid)	more
V1734 — Driver Seat Adjustment Provided	8	Not applicable	more
V1735 — Passenger Seat Adjustment Provided	8	Not applicable	more
V1736 — Driver Seat Adjuster Damage	8	Not applicable	more
V1737 — Passenger Seat Adjuster Damage	8	Not applicable	more
V1738 — Driver Seat Adjuster Separation	8	Not applicable	more
V1739 — Passenger Seat Adjuster Separation	8	Not applicable	more
V1740 — Driver Seat Pre-crash Position	8	Not applicable	more
V1741 — Passenger Seat Pre-crash Position	8	Not applicable	more
V1742 — Left Rear Seat Type	0	None	more
V1743 — Right Rear Seat Type	0	None	more
V1744 — Left Rear Seat Damaged	8	Not applicable	more
V1745 — Right Rear Seat Damaged	8	Not applicable	more
V1746 — Center Rear Armrest Damaged	8	Not applicable (No Center Armrest)	more
V1747 — Left Rear Seat-back Left Lock Equipped	8	Not applicable	more
V1748 — Right Rear Seat-back Left Lock Equipped	8	Not applicable	<u>more</u>
V1749 — Left Rear Seat-back Left Lock Held	8	Not applicable	more
V1750 — Right Rear Seat-back Left Lock Held	8	Not applicable	more
V1751 — Left Rear Seat-back Right Lock Equipped	8	Not applicable	more

V1752 — Right Rear Seat-back Right Lock Equipped	8	Not applicable	more
V1753 — Left Rear Seat-back Right Lock Held	8	Not applicable	<u>more</u>
V1754 — Right Rear Seat-back Right Lock Held	8	Not applicable	more
V1755 — Left 3rd Seat Equipped	0	No	<u>more</u>
V1756 — Right 3rd Seat Equipped	0	No	more
V1757 — Left 3rd Seat Backrest Damaged	8	Not applicable	<u>more</u>
V1758 — Right 3rd Seat Backrest Damaged	8	Not applicable	<u>more</u>
V1759 — Left 3rd Seat Cushion Damaged	8	Not applicable	more
V1760 — Right 3rd Seat Cushion Damaged	8	Not applicable	more
V1761 — Rear Head Restraints	8	Not Applicable (no rear seat)	more

#### MEASUREMENTS IN CENTRALTERS

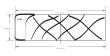


#### TER CENTALTERS



#### WINDSHIELD MARK ON CASE VEHICLE:

unknown



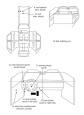
#### 1 = Definitely 2 = Probably 3 = Possible

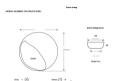
#### INTRUSION IT-1

		(All Me	(All Measurements Are in Centimeters)				Dominant
Location of Intrusion	Intruded Component	Comparison Value	_	Intruded Value	=	Intrusion	Crush Direction
11	Toepan	122	_	72	=	50	To rear
11	Knee bolster/IP	70	_	27	=	43	To rear
11	A-pillar	322	_	284	=	38	To rear
11	Kickpanel		_		=	37	To right
11	Roof	127	_	93	=	34	Down
11	Roof siderail	61	_	28	=	33	Down
11	Floor		_		=	28	Up
11	B-pillar	61	_	34	=	27	To right
11	Steering column		_		=	?	To rear
			_		=		
			_		=		
			_	·	=		
			_		=		

#### OCCUPANT CONTACT WORKSHEET

	Interior	Occupant	Body		Confidence Level of
Contact	Component Contacted	No. if Known	Region if Known	Supporting Physical Evidence	Contact Point
A	Roof siderail	1	Head	Skin, blood	1
В	Roof	1	Head	Skin, blood	1
С	Steering wheel	1	Chest	Scuff	2
D	mid IP	1	Leg/knee	Blood, scuff	2
Е	Knee bolster	1	Knee	Scuff on left side	1
F	Knee bolster	1	Knee	Scuff on right side	1
G	Door panel/armrest	1	Left side	Intrusion	1





Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	01	Injury #1	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	06	Fracture	more
V2107 — Primary OIC -system/Organ	19	Skeletal	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	HLFS3	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	02	Injury #2	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	09	Inferior/lower	more
V2106 — Primary OIC -lesion	06	Fracture	more
V2107 — Primary OIC -system/Organ	19	Skeletal	more
V2108 — Primary OIC -severity	4	Severe	more
V2109 — Primary OIC	HIFS4	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	03	Injury #3	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	18	Rupture	more
V2107 — Primary OIC -system/Organ	05	Eyes/Ears (cases thru 5-82), Ears (after 6-82)	more
V2108 — Primary OIC -severity	2	Moderate	more
V2109 — Primary OIC	HRRE2	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	04	Injury #4	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	02	Brain	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	HLCB3	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	05	Injury #5	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	21	Unknown	more
V2107 — Primary OIC -system/Organ	02	Brain	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	HRUB3	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	06	Injury #6	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	06	Fracture	more
V2107 — Primary OIC -system/Organ	19	Skeletal	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	HRFS3	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	07	Injury #7	more
V2102 — 1st Prob Contact Area	26	Roof side rail	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	22	Avulsion	more
V2107 — Primary OIC -system/Organ	05	Eyes/Ears (cases thru 5-82), Ears (after 6-82)	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	HLVE1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	08	Injury #8	more
V2102 — 1st Prob Contact Area	13	Armrest on side or door	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	13	Abdomen	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	12	Laceration	more
V2107 — Primary OIC -system/Organ	17	Spleen	more
V2108 — Primary OIC -severity	4	Severe	more
V2109 — Primary OIC	MLLQ4	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	09	Injury #9	more
V2102 — 1st Prob Contact Area	13	Armrest on side or door	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	13	Abdomen	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	12	Laceration	more
V2107 — Primary OIC -system/Organ	01	Arteries	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	MLLA3	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	10	Injury #10	more
V2102 — 1st Prob Contact Area	65	Steering wheel	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	01	Arm (upper)	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	ARCI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	11	Injury #11	more
V2102 — 1st Prob Contact Area	48	Knee restraint	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	16	Pelvic/hip	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	26	Fracture with dislocation	more
V2107 — Primary OIC -system/Organ	10	Joints	more
V2108 — Primary OIC -severity	3	Serious	more
V2109 — Primary OIC	PLZJ3	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	12	Injury #12	more
V2102 — 1st Prob Contact Area	48	Knee restraint	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	11	Knee	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	01	Abrasion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	KRAI1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	13	Injury #13	more
V2102 — 1st Prob Contact Area	48	Knee restraint	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	11	Knee	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	12	Laceration	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	KRLI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_		

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	14	Injury #14	more
V2102 — 1st Prob Contact Area	48	Knee restraint	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	11	Knee	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	KLCI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	15	Injury #15	more
V2102 — 1st Prob Contact Area	28	Foot controls (including parking brake pedal)	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	12	Leg (lower)	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	LLCI1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

#### **Case # 317: Occupant # 1**

Variable Number and Name	Code Value	Code Description	Other Options
V2001 — Occupant Number	01	Occupant #1	more
V2002 — Occupant Role At 1st Impact	1	Motor vehicle driver	more
V2003 — Occupant Position -row	1	1st row	more
V2004 — Occupant Position -lateral	1	Left	more
V2005 — Occupant Position -posture	10	Sitting on seat	more
V2006 — Occupant Age In Years	33	_	_
V2007 — Occupant Age In Months	25	25 months or older	more
V2008 — Occupant Mass	077 kg	_	_
V2009 — Occupant Height	178 cm	_	_
V2010 — Occupant Sex	1	Male	more
V2011 — Occupant Treatment/Mortality	04	Hospitalized over 24 hrs or for significant treatment	more
V2012 — Injury Severity Score	41	_	_
V2013 — Non-impact Med Condition	0	None	more
V2014 — Police Injury Severity	3	A - Incapacitating Injury	more
V2015 — Active Restraint System	3	Both lap belt and shoulder harness	more
V2016 — Active Restraint Usage	3	Both lap belt and shoulder harness	more
V2017 — Passive Restraint System	1	Air bag installed	more
V2018 — Passive Restraint Usage	2	Air bag deployed	more
V2019 — Child Seat Type	88	Not applicable (adult or older child)	more
V2020 — Occupant Ejection Degree	0	None	more
V2021 — Occupant Ejection Area	98	Not applicable (not ejected)	more
V2022 — Highest OIC Severity	4	Severe	more

V2023 — Head Restraint Available	1	Equipped	more
V2024 — Occupant Eyewear	0	None	more
V2025 — Source of Occupant Info	1	Hospital	more







